

SQL QUERIES

1. Yearly snowfall trends per country

```
SELECT country_code, EXTRACT(YEAR FROM PARSE_DATE('%Y%m%d', CAST(date AS STRING))) as
year, SUM(SNOW) as total_snow
FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
WHERE SNOW IS NOT NULL
GROUP BY country_code, year;
```

The screenshot shows the Google Cloud BigQuery Studio interface. The top navigation bar includes the Google Cloud logo, 'My First Project', a search bar, and a notification icon. The left sidebar contains an 'Explorer' panel with a search bar and a list of resources, including 'Snowfall Trends' which is currently selected. The main workspace displays the query 'Snowfall Trends' with the following SQL code:

```
1 SELECT country_code, EXTRACT(YEAR FROM PARSE_DATE('%Y%m%d', CAST(date AS STRING))) as year, SUM(SNOW) as total_snow
2 FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
3 WHERE SNOW IS NOT NULL
4 GROUP BY country_code, year;
```

Below the query editor, the 'Query results' section is visible, showing a table with 4 rows of data. The table has columns for 'Row', 'country_code', 'year', and 'total_snow'. The results are as follows:

Row	country_code	year	total_snow
1	US	2021	7111303.0
2	US	2023	7555961.0
3	US	2020	8604391.0
4	US	2022	10430596.0

At the bottom of the results section, there is a 'Job history' table with a 'REFRESH' button.

2. Find out the heavy snow and rainy days in the year.

```
SELECT date,
COUNT(IF(PRCP > 100, 1, NULL)) AS heavy_rainy_days,
COUNT(IF(SNOW > 50, 1, NULL)) AS heavy_snow_days
FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
GROUP BY date;
```

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Explorer

Viewing resources. SHOW STARRED ONLY

- California stations annual...
- Non-California stations wi...
- Overall temperature - US t...
- Select stations temperatu...
- Snowfall Trends
- External connections
- 2020
- staging
- weather_archive_2020da...
- weather_data_historical

SUMMARY

Try new code-management features of BigQuery Studio in Preview: version history, sharing with IAM, and creating Python notebooks with Colab.

ENABLE NOW DISMISS

Untitled

```

1 SELECT date,
2       COUNT(IF (PRCP > 100, 1, NULL)) AS heavy_rainy_days,
3       COUNT(IF (SNOW > 50, 1, NULL)) AS heavy_snow_days
4 FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
5 GROUP BY date;

```

Query results

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	date	heavy_rain_days	heavy_snow_days
1	20230215	2043	1064
2	20230305	955	585
3	20230228	3509	1491
4	20230316	897	329
5	20231030	3667	75
6	20231029	2814	658

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Job history

3.Rainfall each weather station recorded on each day of the week.

```

SELECT station_id,
       FORMAT_DATE('%A', PARSE_DATE('%Y%m%d', CAST(date AS STRING))) AS weekday,
       SUM(PRCP) as total_precipitation
FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
GROUP BY station_id, weekday
ORDER BY station_id, weekday;

```

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Explorer

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```

1 SELECT station_id,
2       FORMAT_DATE('%A', PARSE_DATE('%Y%m%d', CAST(date AS STRING))) AS weekday,
3       SUM(PRCP) as total_precipitation
4 FROM `i-multiplexer-406919.weather_data_historical.weather_data_historical_master`
5 GROUP BY station_id, weekday
6 ORDER BY station_id, weekday;

```

Query results

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	station_id	weekday	total_precipitation
1	US10adam002	Friday	2976.0
2	US10adam002	Monday	2196.0
3	US10adam002	Saturday	4224.0
4	US10adam002	Sunday	2629.0
5	US10adam002	Thursday	2368.0
6	US10adam002	Tuesday	2580.0

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Job history